October 8, 2002

H .Lawrence McKague
Element Manager, GLGP
Center for Nuclear Waste Regulatory Analysis
6220 Culebra Road
San Antonio, Texas, 78228-5516

SUBJECT: REVIEW OF INTERMEDIATE MILESTONE - PVHA_YM VERSION 2.0 -
PROBABILISTIC VOLCANIX HAZARDS ASSESSMENT METHODS FOR A
PROPOSED HIGH-LEVEL RADIOACTIVE WASTE REPOSITORY AT YUCCA
MOUNTAIN, NEVADA - LETTER REPORT (IM0142.246.246.260)

Dear Mr. McKague:

We have reviewed the referenced report and find that it is a significant advance over PVHA_YM
Version 1.0. The data files include most of the various modifications which are present in the
current Yucca Mountain Data sets. New events can be added to the event sets quit easily,
variations in repository location and size can be accommodated, gravity data can be incorporated
into the analysis, and event length and orientation can also be accommodated. The one problem
that we encountered with the code/report is that the pop-up bottons used to include dike/vent
intersection and export data would not appear, and therefore were not available for use, if screen
resolution was set to less than 1024x768 pixels. We ran 4 test cases comparing CNWRA results
with NRC results, and in all cases the results were the same up to seven significant figures. In
addition, we ran 4 additional test cases in which the computer screen was set at 1024x768 pixels
compared to 800x600 pixels, and in all cases the results again were the same up to seven
significant figures, therefore indicating that under the lower screen resolution the code still performs
its function with the exception of the included dike/vent intersection and export data functions. We
also ran many other test cases, and the code always produced results which were reasonable and
in accordance with known data. We therefore, consider the code and report both technically and
programmatically acceptable. We would suggest, however, that an addendum be issued which
states to the effect: Certain aspects of this code will not be available if screen resolution of the
computer is set to less than 1024x768 pixels. In addition, we suggest that a 17 inch monitor or
larger be utilized.

If there are any questions concerning this review please contact me at 301-415-8063 or by e-mail
using jst@nrc.gov.

                                        Sincerely,
                                        /RA/

                                        John S. Trapp, Program Element Manager
                                        High-Level Waste Branch
                                        Division of Waste Management
                                        Office of Nuclear Materials Safety
                                         and Safeguards

cc: D. DeMarco
      D. Riffle
      B. Meehan
      L. Campbell
      J. Schlueter
      B. Hill (CNWRA)
      W. Patrick (CNWRA)

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DATE:	10/08/02		10/08/02			

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